DOUBLE CROPPING WITH SOYBEANS-- WILL IT PAY ON YOUR FARM?

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table of contents

DOUBLE CROPPING WITH SOYBEANS-- WILL IT PAY ON YOUR FARM?

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WHAT IS DOUBLE CROPPING?

"Double cropping" is producing two successive crops on the same field during one year. This may offer a more profitable way to use land. The soil may also benefit as a result of maintaining cover on the land and reducing erosion.

WHY DOUBLE CROPPING?

You can harvest a small grain crop (wheat, barley, or rye) and immediately plant soybeans that will mature the same season. Even a relatively low yield of soybeans in a double-crop system will offset the added cost of producing and harvesting.

Double cropping soybeans with small grain is not only possible, but usually profitable because of recent developments of new herbicides, the availability of adapted soybean varieties, new planting techniques, and equipment.

More and more farmers are trying this double-cropping system. It is proving especially effective in the southern and coastal plain States. Although more suitable to those States, double cropping is also being used successfully in many north central States.

Case Histories

In a 2-year rotation (1968-69) with corn and wheat at five locations in Alabama, the average yield of soybeans was only 0.9 bushels more per acre where the beans were produced alone, than where they were double cropped with wheat. The average yield of wheat was 34.1 bushels per acre and the soybeans double cropped with the wheat produced 29.8 bushels. Where the soybeans were planted as the only crop in those years, their yield was 30.7 bushels.

In other trials in a 3-year Alabama study (1967-69) at the Black Belt substation on Houston Clay, soybeans grown as the principal crop yielded an average of 31.6 bushels per acre. For soybeans grown in a double-cropping system following wheat, the average yield was 26.9 bushels. This was on land where the wheat straw was baled, then plowed and disked before

the soybeans were planted. Where the straw was chopped and the land disked and planted to soybeans without plowing, the yield was reduced to 21.5 bushels.

In Ohio, five trials were conducted with double cropping soybeans following small grain at Wooster and Western Branch experiment stations in 1968-70. The results indicated that the no-tillage operations produced yields superior or equivalent to the yields produced by plowing four trials out of five. The no-tillage produced soybeans yielding an average of 24.4 bushels per acre, compared to 22.1 bushels per acre average for soybeans produced by plowing. The small grain straw was removed from these plots, but the stubble remained.

BEST PRACTICES FOR DOUBLE CROPPING

Your greatest net return from double cropping depends on several factors. Some important practices to reduce losses are:

Harvest Small Grain As Early As Possible

Time saved by early harvest not only improves chances for a better soybean crop, but the increased yield and quality of the small grain go a long way in offsetting added costs.

Will the planted grain be harvested early enough to get a crop of soybeans planted before the last practical date? To hasten the harvest, you have several alternatives. If the small grain is an early maturing variety, there is less chance of failure. Barley is probably the best small grain in this respect, but oats harvested for silage would be even better. Some of the early maturing wheat varieties can be harvested early enough so that the soybeans can be planted in time to mature. Early harvesting and drying of the small grain will make earlier planting of soybeans possible.

Use the Best Equipment Available

If at all possible, use a *straw chopper attachment* on your *combine*. If a *straw chopper* is not used, plowing will take more time. Chopping the straw reduces the possibility of clogging the *plow* or *no-tillage soybean planter*. It may be necessary to remove part of the small grain straw.

When using the *no-tillage planter*, leave about an 8-inch stubble standing in the field.

State specialists report that double-cropped soybeans can be successfully planted with a no-tillage method, especially when the straw (when it is not too heavy) and the stubble are left undisturbed after combining the small grain.

Use Herbicides Safely and Properly

Apply an appropriate herbicide either before or immediately after planting your soybeans. For no-tillage plantings, use the right contact-type herbicide plus a surfactant and a residual herbicide. For a seedbed prepared by plowing, only an incorporated herbicide may be necessary.

Herbicide use depends on the nature and kinds of weeds present. All established weed growth must be killed as quickly as possible to make double cropping work.

Under no-tillage planting conditions where a lot of straw and stubble are on the field, be sure you have an adequate contact herbicide covering for effective weed control. Avoid fields with problem weeds like johnson grass, or take extra measures to insure weed control.

Always follow instructions on the label and apply herbicides according to given regulations and recommendations. Take precautions to prevent residual herbicide from injuring the next crop.

Select the Variety of Soybeans Suited to Your Farm

When double cropping for the first time, check with your local Extension agricultural agent for the varieties best suited to your part of the country. The selected variety should mature late enough to take advantage of the remaining growing season, but before the normal frost date for your area. (See figure 1.) Select disease resistant varieties appropriate for your farm.

An early variety is not always the best solution, even when the beans are planted later than normal. Soybeans react greatly to day length. An earlier variety might seed so close to the ground that some of the beans will be below the cutter bar at harvest.

It is desirable to shorten the time between the date of planting and the date when the soybeans will completely shade the ground, in order to conserve moisture, retard weed growth, and keep soil temperature lower. To shorten this time, place the rows as close together as feasible with your equipment; 20 inches seems to be a practical width between rows for no-tillage planting. Where the land is plowed, consider grain drill planting or spacing 7 or 8 inches between rows.

ARE SOYBEANS A CROP FOR POOR LAND?

Contrary to common belief, soybeans are not a crop for poor land. A bushel of soybeans takes 50 percent more phosphorus from the soil than a bushel of wheat. It takes at least 3½ times more potassium.

Soybeans yield best on a slightly acid soil, nearly neutral (pH 6.2 to 6.8). Liming soils that are too acid is essential for high soybean yields. Have your soil tested to see whether you need to add potassium, phosphorus, or lime. These can be applied as a fertilizer, manure, or limestone.

The response of soybeans to nitrogen fertilizer has been inconsistent. Sometimes an increase of a few bushels is reported for small amounts (15 to 20 pounds of nitrogen per acre). At other times, there is no increase. If applied in the row at planting, the added nitrogen may reduce the stands.

Inoculation is recommended for fields that have not previously produced soybeans, or where the soil has not been maintained in a high state of fertility. Most commercial inoculations contain effective strains of bacteria that are efficient nitrogen-gathering organisms.

Soybeans do not perform well on tight, compact soils. Southeastern growers have found an advantage in placing ripper points (alfalfa steels) on the planter just behind the fluted coulters and ahead of the planter shoes. This tearing up of the soil makes it possible for better root and air penetration. Where soils are well supplied with organic matter, this treatment is less important.

DISEASE CONTROL

With so many varieties of organisms present in the soil, we cannot generalize as to whether double cropping or a minimum tillage operation will reduce or increase soybean diseases. Much depends on the particular crop or the sequence of crops and the varieties grown over a period of time.

Crop rotation is very important in reducing disease buildup. When soybeans are grown year after year in the same soil, there is a much greater danger of buildup of common and destructive diseases. Rotation and resistant varieties coupled with correct tillage practices is important to an optimum soil disease prevention program. Double cropping your soybeans and small grains may provide some of the benefits of crop rotation in reducing soil diseases.

MOISTURE

From the harvesting of the small grain, through planting the soybeans, until the final harvesting, moisture plays an all-important role.

Moisture in Small Grain Harvest

Gaining 4 or 5 days by planting soybeans sooner can be critical to germinating the seed. You can gain this time by harvesting the small grain a few days earlier. You can harvest it earlier if you have equipment for drying, or can obtain drying facilities at a fair cost. Otherwise, it must be left in the field to dry down to a safe storage or marketing level. Wheat will combine well at 19 percent to 22 percent moisture without sacrificing quality, and often the yield is improved. Combining the small grain early and artificial drying reduce field losses from shattering and lodging. Also, grain quality is less likely to deteriorate.

It doesn't take long at harvest time when air temperature is high, for your grain to start heating. Therefore, when you harvest grain at 19 to 22 percent moisture, you *must* begin drying within a few hours. If your grain is dried to a safe storage moisture and then becomes remoistened, it could lose appearance and test weight.

It will cost you extra to artifically dry high-moisture wheat. What you need to decide is: will it pay you to dry your small grain to allow earlier planting of soybeans?

Soybeans Need Moisture to Germinate and Grow

Some farmers are willing to gamble and plant soybeans in a dry soil, but it is best to have needed moisture available in the top 6 inches at planting time to insure a good stand. If your double cropping is to succeed, make sure there is adequate moisture available in the planting zone.

Some moisture present at grain harvest is easily lost if the surface is disturbed. Also plant as soon after harvest as possible. If practical, leave the straw on the field and use the no-tillage planter for seeding your soybeans.

Ohio agronomists report that double cropped soybeans are likely to fail in years when soil is dry at the time the small grain is harvested—that is, if the soil is dry not only on the surface, but to a depth of 3 or more feet. In such years, a second crop soybean planting should not be attempted.

Years with a dry June (or the time when you are harvesting small grain and planting soybeans) may have sufficient rainfall a few days after planting to produce a break-even crop. (See figure 2.) But there is risk of not getting enough moisture. If you don't get rain in time for planting soybeans, forget double cropping that year.

Also, there should be ample moisture for soybeans at the seed formation stage, usually between mid-August and mid-September. This available moisture will depend on the rainfall, soil conditions and soil preparations. About 3 to 4 inches of well distributed rainfall is needed during this stage. (See figure 3.)

At harvest time, if you plan on storing the soybeans on your farm, check their moisture to see that it is down to 10 to 13 percent. If it is more than 13 percent, either dry or market the soybeans right away.

KEEP SOIL TIED DOWN

Keep the soil tied down in order to prevent loss of valuable topsoil and to continue to produce high yields of soybeans and other crops. Sloping land under clean cultivation is subject to soil erosion from water runoff. The soil carries the plant nutrients that are attached. Soybean fields are susceptible to wind erosion after harvest and particularly if they are fall-plowed and no cover crop is established.

To prevent soil erosion:

- Use minimum tillage and no-tillage production methods.
- Grow winter cover crops.
- Perform field operations on the contour.
- Leave fall-plowed fields rough and cloddy.
- Build terrace systems where needed.

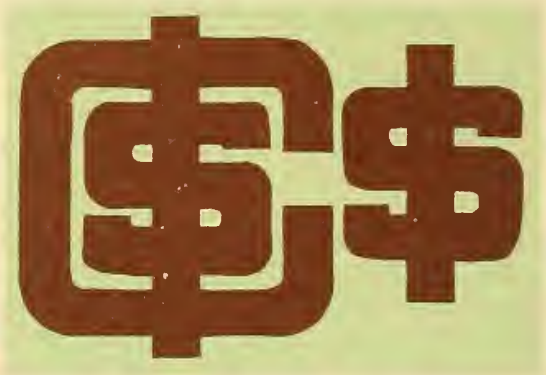
Profitable double cropping of soybeans protects and conserves the soil, and improves it for the future, while the same practices prevent air and water pollution.

Keeping your soil tied down helps prevent dust storms and floods, and keeps sediment from filling reservoirs and causing muddy streams. It costs much more to dredge the sediment out of the reservoirs and streams than it does to hold the soil on the fields.

WHAT ARE THE ECONOMICS OF DOUBLE CROPPING?

Examples of State Budgets

In evaluating double cropping, consider the total yearly production from both crops. The soybean yields in the 15-to 35-bushel per acre range "doubled" with 40- to 70-bushel yields of wheat or barley can be a very profitable enterprise. After studying the factors summarized in the previous pages, it is clear that cost and



returns of growing soybeans as a double crop may vary widely under differing conditions. Budget illustrations from Illinois, Missouri, Virginia, North Carolina, and Ohio are discussed briefly below, and detailed on the following pages.

Illinois (table 1)—This budget indicates that the variable costs for Illinois conditions might range from about $34 per acre for a no-tillage operation to $19 for conventional plow disk-tillage. This budget also indicates that a yield of 13.5 to 7.6 bushels would be required to break even with variable production costs using a soybean price of $2.50 per bushel. The required break-even yield would be much lower, with prices in the $3 to $4 range. In most years when moisture is available after the small grain harvest, there would be little problem in exceeding these break-even yields.

Missouri (table 2)—An irrigated double crop soybean budget is shown for the

southeastern area of Missouri, known as the Bootheel area. This Missouri budget, with the insurance of irrigation, indicates the possibility of yields ranging from 25 to 45 bushels per acre. Variable costs are estimated between $24 to $26.50 depending on the amount of fertilizer used.

North Carolina (table 3)—For an acre of full-season soybeans, North Carolina workers estimate variable costs to be around $35 using conventional plow disk land preparation. This budget also indicates that it takes approximately $10 to pay for depreciation, taxes, and interest on machinery used in double cropping, making a total of $45 in costs before payment for land, labor, and management.

Virginia (table 4)—Total expenses of $40.54 per acre are estimated in the double-crop budget for Virginia. One-half of the land charge for the year is also included in total expenses. Using the total expense figure and the estimate of a 16-bushel yield, the Virginia budget shows a calculation of $2.53 cost per bushel. Also, the Virginia figures estimate that slightly less than 2 hours of labor are required per acre of double-crop soybeans and that the return to labor and management would be $7.70 per hour.

Ohio (table 5)—Examples of budget calculations are shown for Ohio conditions in table 5. The variable costs of a disk and plant operation are compared with the variable costs of no-till planting on two different dates. The disk and plant approach has slightly higher variable costs and labor requirements. Also, the above double-crop budgets combining soybeans and wheat show the total costs and returns for the use of land over a full year. In table 6, Ohio budgets for corn production and a full-season crop of soybeans are shown in comparison with the double-crop wheat-soybean budgets. Returns over variable costs, and net profit over total expenses estimated for each of three prices for corn, soybeans, and wheat are shown. The combined wheat-soybean budget shows greater profitability with the higher levels of crop prices. The profitability picture increases even further with the higher yield of double-crop soybeans projected in the June 25-27 no-till plant budget.

Table 1—ILLINOIS: Estimated Break-even Yields to Cover Added Costs of Double Cropping

	Double Crop Soybeans Planted After Wheat	
	No-tillage	Plow-disk
Variable costs/A.		
seed	$ 5.00	$ 5.00
fertilizer	3.00	3.00
herbicide	17.00	4.00
tilling	—	3.00[a]
planting	4.50[b]	1.00[a]
custom spraying	1.25	—
harvesting	3.00[a]	3.00[a]
labor	—	—
other	—	—
Total variable costs	$33.75	$19.00
Price per bushel	2.50	2.50
Break-even yield (bu.)	13.5	7.6

[a] Fuel and repairs only.
[b] Fuel, repairs and depreciation on till-planter.

(Prepared by Dr. Royce Hinton, Extension Farm Management Specialist, University of Illinois.)

Table 2—MISSOURI: Irrigated Double-Crop Soybean Budgets for Bootheel Area
Description of Production: 5–6 plow tractor, heavy cutting disk, custom fertilizer spreader, planter, cultivator, herbicide applicator, 13 foot combine, plus either flood or sprinkler irrigation.

				MY FARM
1. Yield, bushels per acre	25	35	45	
2. Price per bushel [1]	$ 3.20	$ 3.20	$ 3.20	
3. Gross income per acre	$80.00	$112.00	$144.00	
4. VARIABLE COST PER ACRE:				
5. Machinery	$ 8.00	$ 8.00	$ 8.00	
6. Custom machine hire	--	--	--	
7. Limestone [2]	--	--	--	
8. Fertilizer	3.50	4.75	6.00	
9. Seed	5.00	5.00	5.00	
10. Insecticides-fungicides	.75	.75	.75	
11. Pre-emergence herbicides	4.50	4.50	4.50	
12. Post-emergence herbicides	--	--	--	
13. Desiccation or defoliation	--	--	--	
14. Drying	--	--	--	
15. Irrigation	2.25	2.25	2.25	
16. _____	--	--	--	
17. SUBTOTAL	$24.00	$ 25.25	$ 26.50	
18. Interest (Line 17 x 3½%) [3]	$ .84	$ .88	$ .93	
19. Total variable cost	$24.84	$ 26.13	$ 27.43	
20. Income above variable cost	$55.00	$ 86.00	$116.50	

Labor hours/acre	Total	Dec.-Mar.	Apr.-June	July-Aug.	Sept.-Nov.
6-row equipment (flood)	3.44	0	1.92	.86	.66
6-row equipment (sprinkler)	2.79	0	1.70	.43	.66

[1] Price used is long-run expected average annual price at the farm.
[2] Limestone charged to first crop.
[3] Interest computed at 7% per year or 3½% for 6 months.

Table 3—NORTH CAROLINA: Soybeans—Estimated revenue, operating expenses, annual ownership expenses and net revenue per acre

Item	Description	Unit	Quantity	Price	Amount
Gross revenue:	Yield	bu.	35	$ 2.50	$87.50
Operating expenses:					
Seed		bu.	¾	$4.75	$3.56
Seed treatment					.11
Inoculation					.20
Molybdenum					.30
Fertilizer	0–10–20	cwt.	4	2.62	10.48
	Lime (1 ton every 3 years)	ton	⅓	10.00	3.33
Herbicide					7.00
Insect control	Custom				3.62
Machinery operating expenses:	60–79 h.p. tractor	hr.	2.03	1.45	2.94
	12′ self-propelled combine	hr.	.38	3.87	1.47
	2 ton truck	hr.	.50	3.70	1.85
	Other machinery				.84
Total operating expenses					$35.70
Net revenue over operating expenses					$51.80
Value of labor		hr.	2.91	$ 1.50	$ 4.37
Net revenue to capital, land and management					$47.43
Annual ownership expenses:					
Tractor	60–79 h.p.	hr.	2.03	$ 1.52	$ 3.09
Combine	12′ self-propelled	hr.	.38	10.38	3.94
Truck	2 ton	hr.	.50	3.15	1.57
Other machinery					1.65
Total annual ownership expenses					$10.25
Net revenue to land and management					$37.18

(Prepared by John G. Clapp, Extension Agronomy Specialist and D. G. Harwood, Jr., Extension Economist, Farm Management, North Carolina State University.)

Table 4—VIRGINIA: Crop Budget Form.
Enterprise Budget For One Acre of Soybeans (Conventional Behind Double-Crop Wheat)

Line	Item	Price Per Unit	Quantity (lbs., bu., tons, etc.)	Total Amount
	Income:			
1	Soybeans	$3.25	16	$52.00
2				
3			GROSS INCOME	$52.00
	Expenses:			
4	Seed or prorated seeding cost	$5.00/Bu.	1 Bu.	$ 5.00
5	Seed treatment (inoculation)			.10
6	Fertilizer: N carry over from wheat Fert.			
	P " " " " "			
	K " " " " "			
7	Lime (½ charged to soybeans)	9.00/T.	⅓ Ton/Yr.	1.50
8	Spray material			
9	Large tractor cost	3.84	.825 Hrs.	3.17
	Medium tractor cost	2.96	.317 Hrs.	.94
10	Production machinery cost			3.65
11	Harvesting machinery cost			5.81
12	Lorox	3.00/lb.	1 lb./A.	3.00
13				
14			Expenses (sub-total)	$23.17
15	Labor (Total)	1.75	1.9245	3.37
	($400.00 Value/Acre) × 7% interest and taxes (½ charged to soybeans)			14.00
16	Land			
			TOTAL EXPENSES	$40.54

18	$52.00 Gross Income (Line 3)	−	$23.17 Expenses (sub-total) (Line 14)	=	$28.83 Return to Land, Labor, and Management	
19	$52.00 Gross Income (Line 3)	−	$40.54 Total Expenses (Line 17)	=	$11.46 Net Per Acre (Return to Management)	
20	$11.46 Net Per Acre (Line 19)	+	$3.37 Labor Expenses (Line 15)	÷ 1.9245 Total Hr. Labor (Line 15)	=	$7.70 Per Hr. Return For Labor and Management
21	$40.54 Total Expense	÷	16 Quantity	=	$2.53 Cost Per Unit	

LABOR REQUIREMENTS (From Table B)

	1.		4.		7.	1.3885	10.		
	2.		5.		8.		11.	.5360	
	3.		6.		9.		12.		
	Quarterly Totals					1.3885		.5360	
22	Yearly Total 1.9245								

(Prepared by W. M. Clemont, Extension Agent, Farm Management, Virginia Polytechnic Institute and State University.)

Table 5—OHIO: Example Double-Cropping Soybean Budget
Returns Over Variable Costs When Following Winter Wheat, 1973

	Disk and Plant	No-Till Plant	
	June 25–27	July 8–10	June 25–27
1. Soybean Yield—Bushels Per Acre	16	17	21
2. Price Per Bushel	$ 3.00	$ 3.00	$ 3.00
Gross Income Per Acre	$48.00	$51.00	$63.00
VARIABLE COST PER ACRE			
3. Machinery (fuel and repairs cost only) Till (17′ disk—twice over) Plant (6 row—twice over) Spray (6 row) Harvest 14′ combine	7.00	4.50	4.50
4. Fertilizer	3.00	3.00	3.00
5. Seed	7.00	7.00	7.00
6. Herbicides (¼lb. paraquat, 2 lb. Lasso, and 1 lb. Lorox)	12.00	12.00	12.00
7. Drying (of wheat crop)	4.50	—	4.50
TOTAL VARIABLE COSTS	$33.50	$26.50	$31.00
RETURN OVER VARIABLE COSTS (except labor) PER ACRE	$14.50	$24.50	$32.00
LABOR REQUIRED (hours)	3.0	2.5	2.5

(Prepared by Dr. Richard Duvick, Extension Farm Management Specialist, Ohio State University.)

Table 6—OHIO: Example Budgets for Corn, Soybeans, and Double-Cropping Winter Wheat-Soybeans, 1973

				Double-Cropping Wheat and Soybeans		
			Corn	Full-Season Soybeans	Disk & Plant June 25–27	No-Till Plant July 8–10	No-Till Plant June 25–27
Yield—Bushels Per Acre							
Corn			100	—	—	—	—
Soybeans			—	33	16	17	21
Wheat			—	—	45	45	45
Power and Machinery			$ 19.00	$ 15.70	$ 17.90	$ 15.40	$ 15.40
Fertilizer and Lime			18.10	4.00	16.50	16.50	16.50
Seed			3.75	4.00	12.25	12.25	12.25
Chemicals			6.45	7.00	12.00	12.00	12.00
Drying (of wheat)			—	—	4.50	—	4.50
TOTAL VARIABLE EXPENSES			$ 47.30	$ 30.70	$ 63.15	$ 56.15	$ 60.65
Labor @ $2.50/hour			15.00	11.25	10.95	9.70	9.70
Land Charge			30.00	30.00	30.00	30.00	30.00
TOTAL EXPENSES			$ 92.30	$ 71.95	$104.10	$ 95.85	$100.35
Return Over Variable Costs (except labor) If Prices Per Bu. Are:							
Corn	*Soybeans*	*Wheat*					
1.10	3.00	1.50	$ 62.70	$ 68.30	$ 52.35	$ 62.35	$ 69.85
1.30	3.50	1.80	82.70	84.80	73.85	84.35	93.85
1.50	4.00	2.10	102.70	101.30	95.35	106.35	117.85
Net Profit Per Acre If Prices Per Bu. Are:							
Corn	*Soybeans*	*Wheat*					
1.10	3.00	1.50	$ 17.70	$ 27.05	$ 11.40	$ 22.65	$ 30.15
1.30	3.50	1.80	37.70	43.55	32.90	44.65	54.15
1.80	4.00	2.10	57.70	60.05	54.40	66.65	78.15

(Prepared by Dr. Richard Duvick, Extension Farm Management Specialist, Ohio State University.)

Calculating Your Own Costs and Returns

Following are three sample budget calculations for double cropping soybeans, which give broad general estimates of costs and returns for this practice in the southeastern States. You can use these forms to calculate an estimated budget for double cropping on your own farm.

Budget A is based on conventional plow-disk land preparation following harvest of a small grain crop.

Budget B is based on no-tillage land preparation after small grain harvest.

Budget C gives calculations of possible costs and returns if small grain is harvested early, with high moisture content, and dried. This permits earlier planting of double-cropped soybeans and usually results in higher soybean yields.

For all three budgets, calculations are shown based on two alternative levels of yield expectations.

Note that no-tillage together with drying small grain gives the greatest yields in these sample budgets. If you want to make estimates for your farm, using a combination of no-tillage with early harvest and drying of small grain, you can use the "My Farm" columns of budgets B and C.

A note of caution: In mid-1973, when this publication was prepared, the budgets illustrated may not have reflected more recent inflationary costs of production and harvesting. You should adjust your figures to fit current costs.

DOUBLE CROP SOYBEANS—SAMPLE BUDGET CALCULATIONS

A—Using Conventional Plow-disk Land Preparation

	Alternative One	Alternative Two	My Farm
Yield	15 bu.	24 bu.	_____
Price at Harvest	3.00	3.00	_____
Gross Income	45.00	72.00	_____
Variable Costs (except labor)			
Seed	7.00	7.00	_____
Fertilizer	5.00	7.00	_____
Liming	2.00	2.00	_____
Herbicide	6.00	6.00	_____
Insecticide and Disease Control	_____	_____	_____
Defoliation	_____	_____	_____
Gas and Oil	3.50	4.00	_____
Machinery Repairs	3.00	3.50	_____
Custom Work (hauling, harvesting, etc.)	_____	_____	_____
Total Variable Cash Costs	26.50	29.50	_____
Income Above Variable Cash Costs	18.50	42.50	_____
Labor			
Hrs. per Acre	3.00	3.00	_____
Hourly Rate	2.50	2.50	_____
Hrs. × Rate	$7.50	$7.50	_____
Income Above Variable and Labor Costs	11.00	35.00	_____

DOUBLE CROP SOYBEANS—SAMPLE BUDGET CALCULATIONS

B—Using No-tillage Method.

	Alternative One	Alternative Two	My Farm
Yield	18 bu.	24 bu.	_____
Price at Harvest	3.00	3.00	_____
Gross Income	54.00	72.00	_____
Variable Costs (except labor)			
Seed and Inoculation	7.00	7.00	_____
Fertilizer	5.00	7.00	_____
Liming	2.00	2.00	_____
Herbicide	8.00	8.00	_____
Insecticide and Disease Control	_____	_____	_____
Defoliation	_____	_____	_____
Gas and Oil	2.50	3.00	_____
Machinery Repairs	2.00	2.50	_____
Custom Work (hauling, harvesting, etc.)	_____	_____	_____
Total Variable Cash Costs	26.50	29.50	_____
Income Above Variable Cash Costs	27.50	42.50	_____
Labor			
Hrs. per Acre	2.00	2.00	_____
Hourly Rate	2.50	2.50	_____
Hrs. × Rate	$5.00	$5.00	_____
Total Added Net Return to Land, Management, and Capital from Double Crop of Soybeans Plus Drying Small Grain	22.50	37.50	

DOUBLE CROP SOYBEANS—SAMPLE BUDGET CALCULATIONS

C—If Small Grain Is Dried

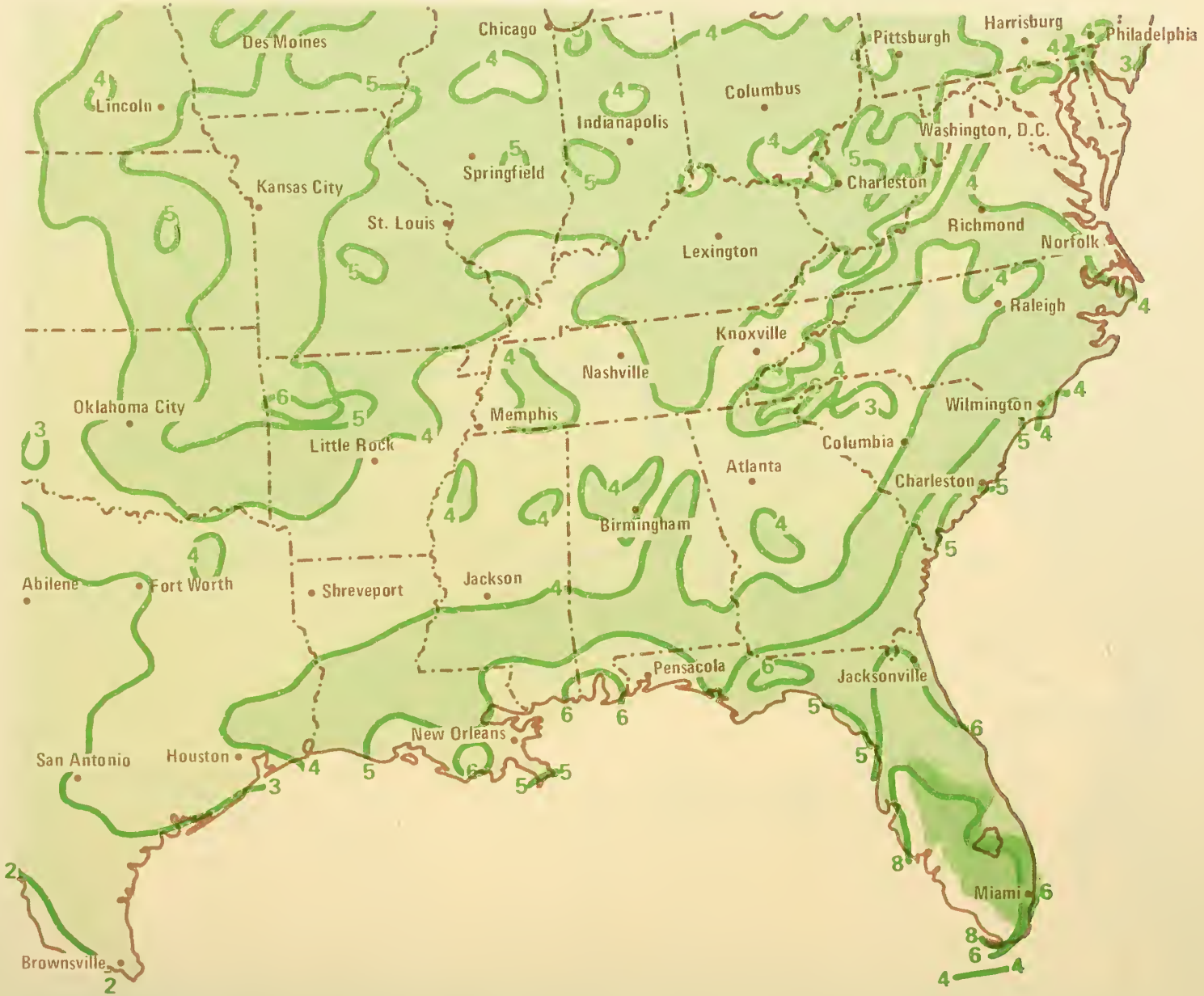
	Alternative One	Alternative Two	My Farm
Added Income From Drying			
Yield of Small Grain Saved	2 bu.	2 bu.	_____
Price at Harvest	1.50	1.50	_____
Yield × Price	$3.00	$3.00	_____
Increased Yield of Soybeans From Early Harvest of Small Grain			
Yield Increase[1]	3 bu.	4 bu.	_____
Soybean Price	3.00	3.00	_____
Price × Yield	9.00	12.00	_____
Gross Income From Drying	12.00	15.00	_____
Expense of Drying			
Cost per Bu.[2]	.10	.10	_____
Yield	40 bu.	40 bu.	_____
Cost × Yield	4.00	4.00	_____
Net Income Gain From Drying	8.00	11.00	_____
Total Added Net Return to Land, Management, and Capital from Double Crop of Soybeans Plus Drying Small Grain	19.00	46.00	_____

[1] These soybean yield increases are in addition to the soybean yields shown in sample budgets A and B.
[2] This item may be either the custom cost for drying or the cash outlay for operating an owned dryer.

Fig. 1—AVERAGE DATES OF FIRST FROST.

Data from Environmental Science Services Administration, U.S. Department of Commerce.

Fig. 2—Normal Rainfall in June (Inches). Based on Period 1931-60.



Data from Environmental Science Services Administration, U.S. Department of Commerce.

Fig. 3—Average Rainfall (inches), August 15–September 15

Data from Environmental Science Services Administration, U.S. Department of Commerce.

Notes

Notes

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This publication is one in a series on facts and issues concerning the soybean industry. It is prepared and distributed under the auspicies of the Soybean Industry Resource Committee.

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